2010-12-01 Wednesday Morning Notes

Wednesday, December 01, 2010
7:29 AM

Stacking & Transfers

- Average Stacking
  - 25.5mA/hr
  - 19.8 pbar/MP
  - 8.01 Tp on target
- Transfers
  - Unstacked 453E10 in 57 transfers over 18 sets with an average efficiency of 95.3%

Pbar Access (http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=309&anchor=102053&hilite=10:20:53-)

- LCW Leaks repaired (The first is a fast dripper on the top wall side black hose on A4Q3. The seconds is a slow dripper on the aisle side bottom black hose on A1B8).
- the two spare "Pulse PS Power Modules" for the Septum power supplies, were checked out in D:ESEP. Both modules ran ok with no overheating for 20 minutes, and they will be stored in AP10, behind Kicker D:EKIK. Worklist entry # 12632 is complete. (B. Wisner, C. Bair)
- We made a small orbit correction with A:HT104 to take out some of the orbit distortion that I noticed earlier. On the left is the starting difference orbit and on the right is the ending difference orbit
- Debuncher momentum double notch filter.
- Stochastic cooling experts are also checking on the core 4-8 dp laser receiver diode

Numbers

- Stacking
  - Pbars stacked: 458.25 E10
  - Time stacking: 20.21 Hr
  - Average stacking rate: 22.67 E10/Hr

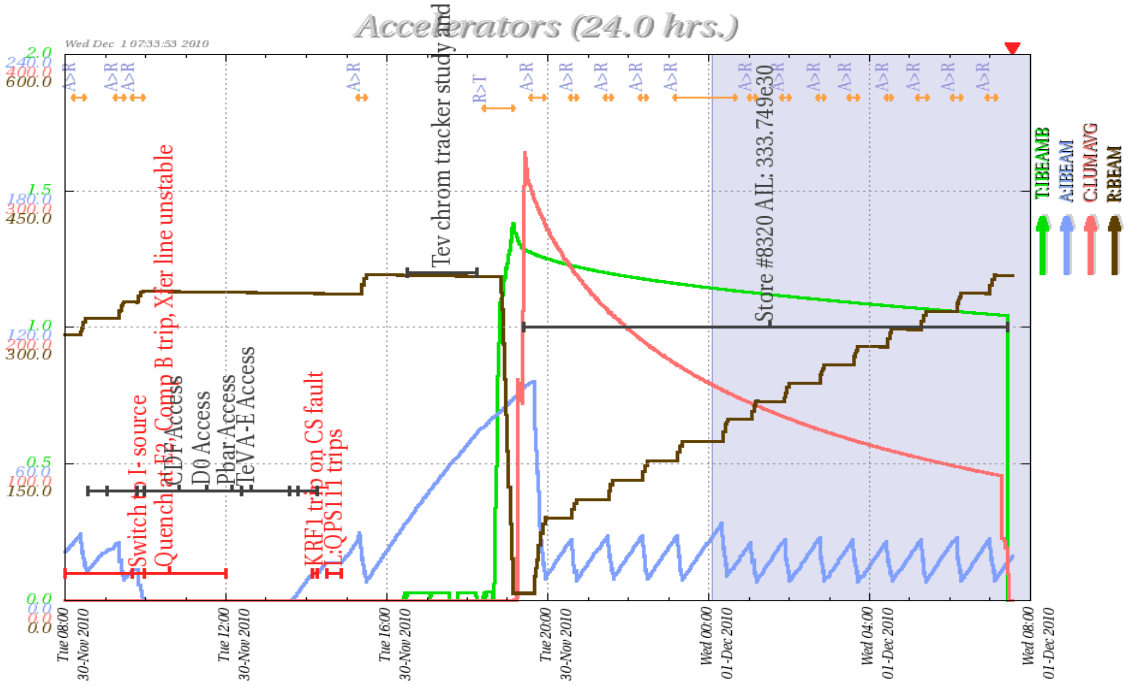
- Uptime
  - Number of pulses while in stacking mode: 32233
  - Number of pulses with beam: 29925
  - Fraction of up pulses was: 92.84%

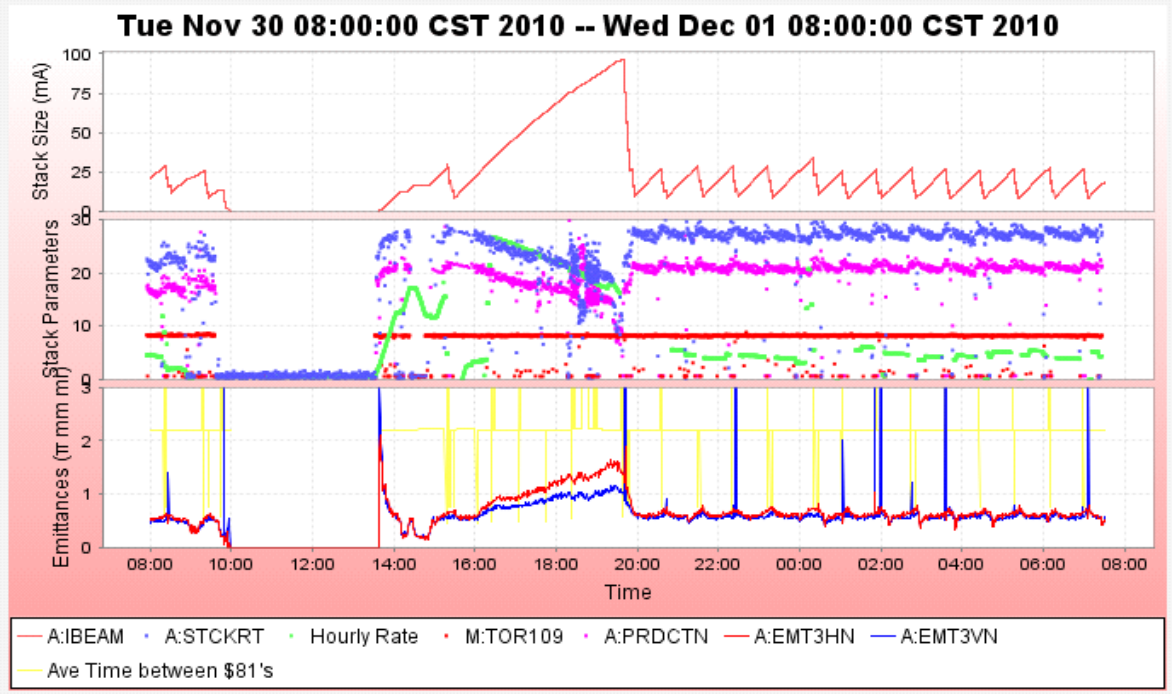
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 18.76 Hr
  - Possible average stacking rate: 24.42 E10/Hr
  - Could have stacked: 493.59 E10/Hr

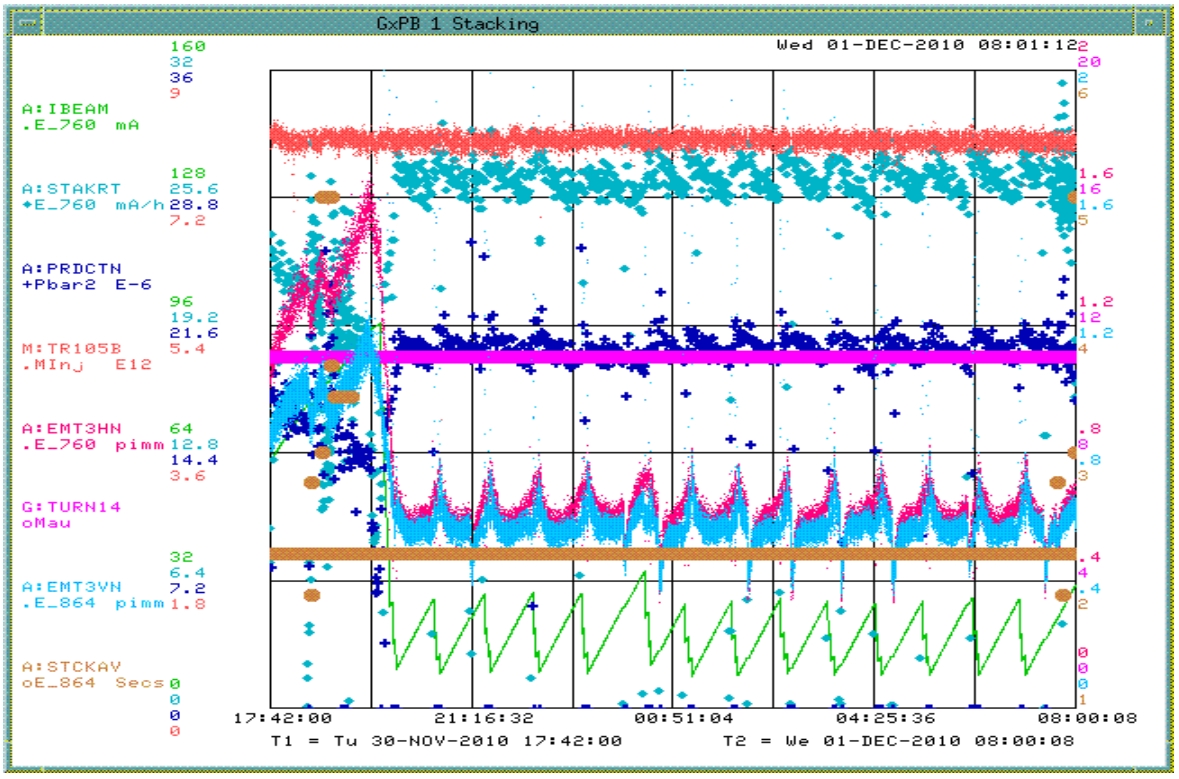
- Recycler Transfers
  - Pbars sent to the Recycler: 442.11 E10
  - Number of transfers : 56
  - Number of transfer sets: 18
  - Average Number of transfer per set: 3.11
  - Time taken to shoot including reverse proton tuneup: 00.20 Hr
  - Transfer efficiency: 95.06%

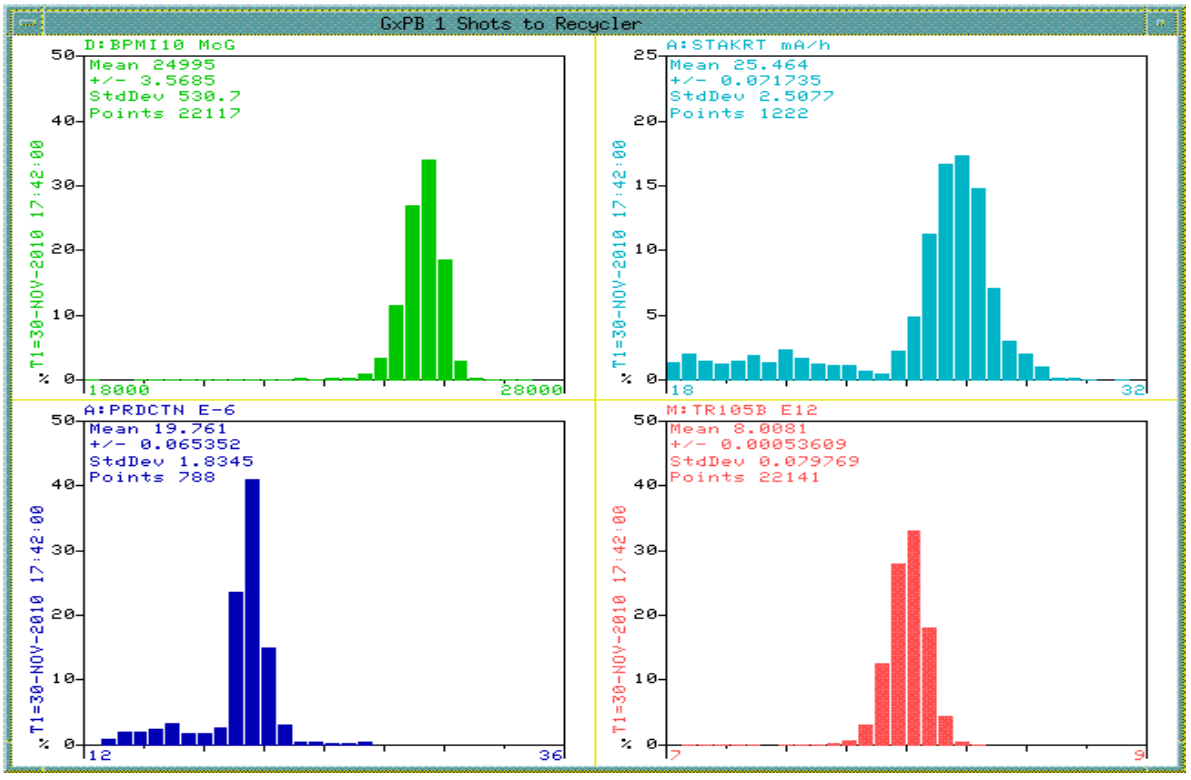
- Other Info
  - Average POT : 8.02 E12
  - Average production: 19.09 pbars/E6 protons

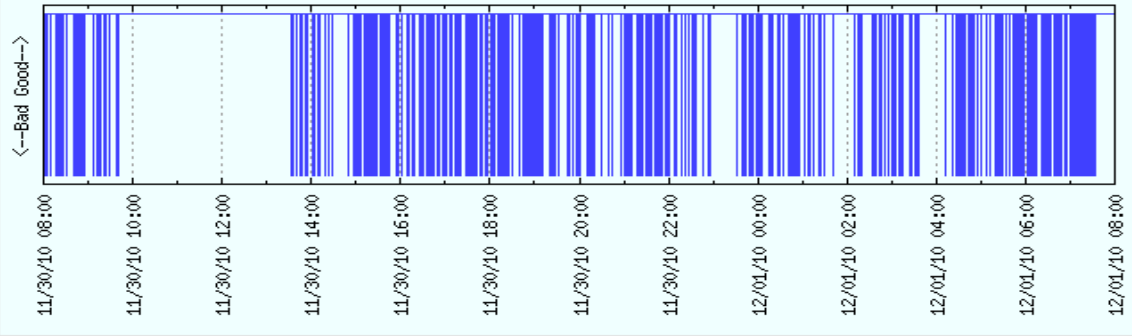
Plots






GxPB 1 Stacking
Wed 01-DEC-2010 08:01:12
A:IBEAM
.E_760 mA
160
32
36
9
A:STAKRT
+E_760 mA/h
128
25.6
28.8
7.2
A:PRDCTN
+Pbar2 E-6
96
19.2
21.6
M:TR105B
.MInj E12
5.4
A:EMT3HN
.E_760 pimm
64
12.8
14.4
3.6
G:TURN14
oMau
A:EMT3VN
.E_864 pimm
32
6.4
7.2
1.8
A:STCKAV
oE_864 Secs
0
0
0
0
17:42:00
21:16:32
00:51:04
04:25:36
08:00:08
T1 = Tu 30-NOV-2010 17:42:00
T2 = We 01-DEC-2010 08:00:08


GxPB 1 Shots to Recycler
D:BPMI10 McG
Mean 24995
+/- 3.5685
StdDev 530.7
Points 22117
18000
28000
A:STAKRT mA/h
Mean 25.464
+/- 0.071735
StdDev 2.5077
Points 1222
18
32
A:PRDCTN E-6
Mean 19.761
+/- 0.065352
StdDev 1.8345
Points 788
12
36
M:TR105B E12
Mean 8.0081
+/- 0.00053609
StdDev 0.079769
Points 22141
7
9
T1=30-NOV-2010 17:42:00



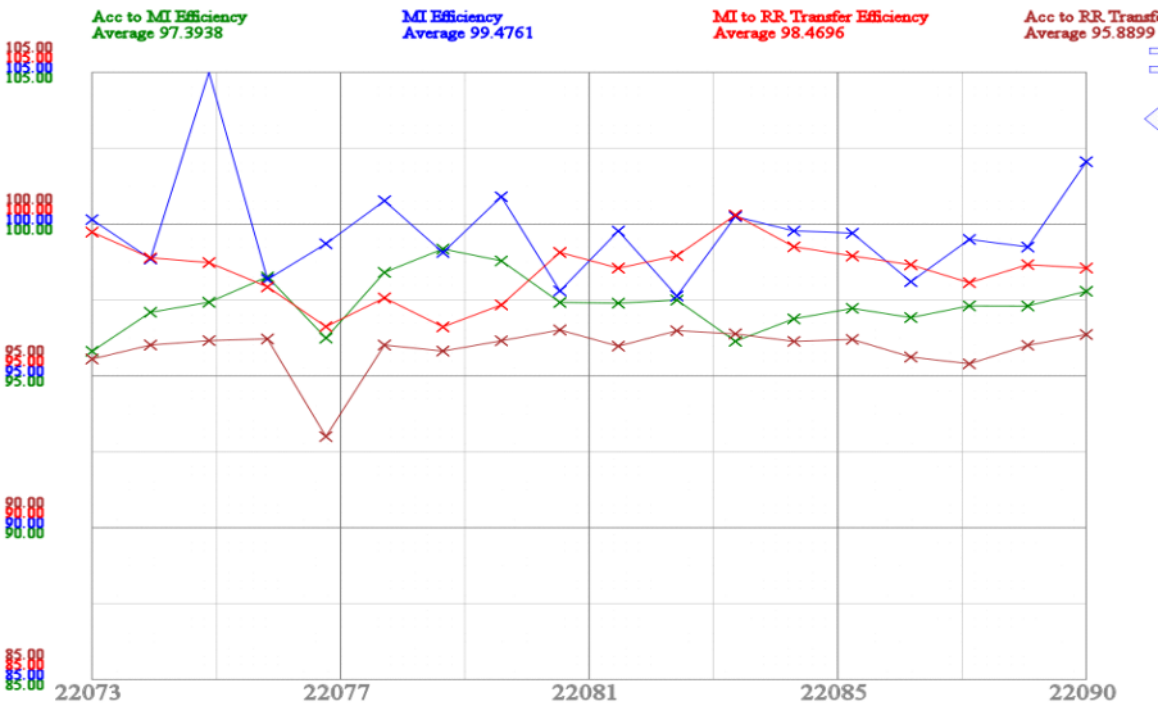
Alarm History for

D:P3AM3

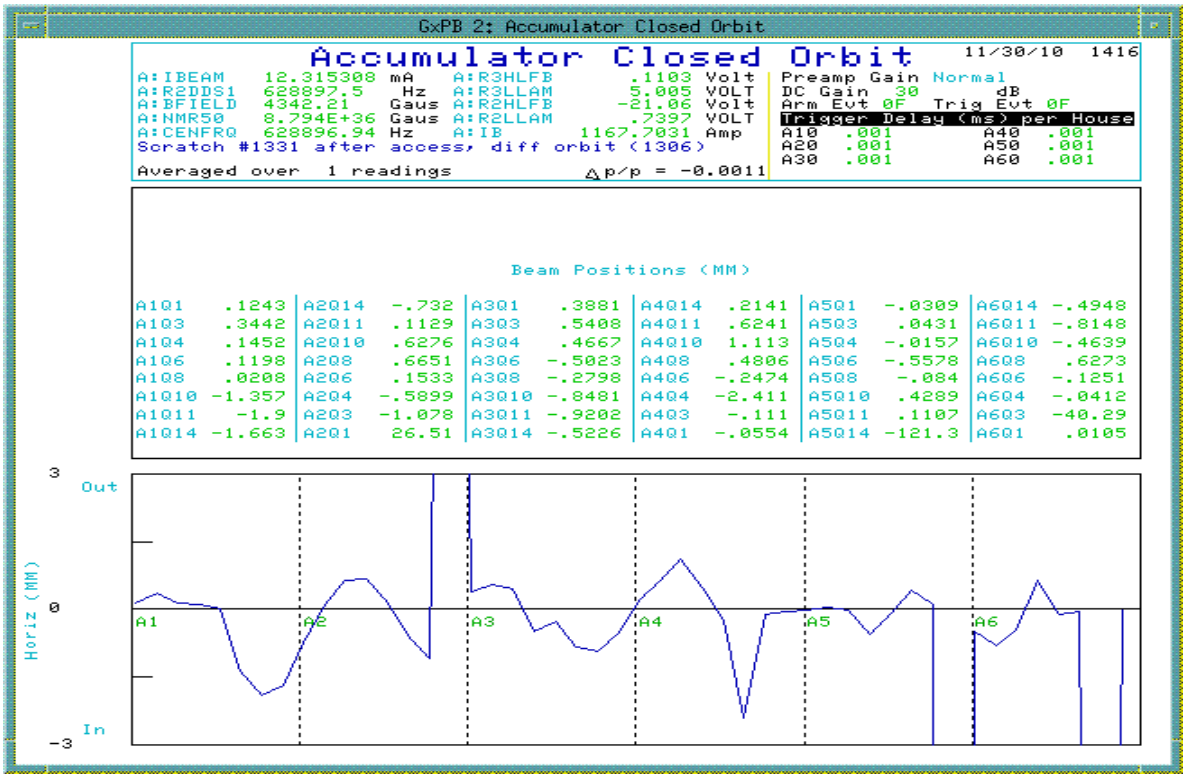
In alarm 1.70% of the time

Wed Dec 1 07:36:11 2010

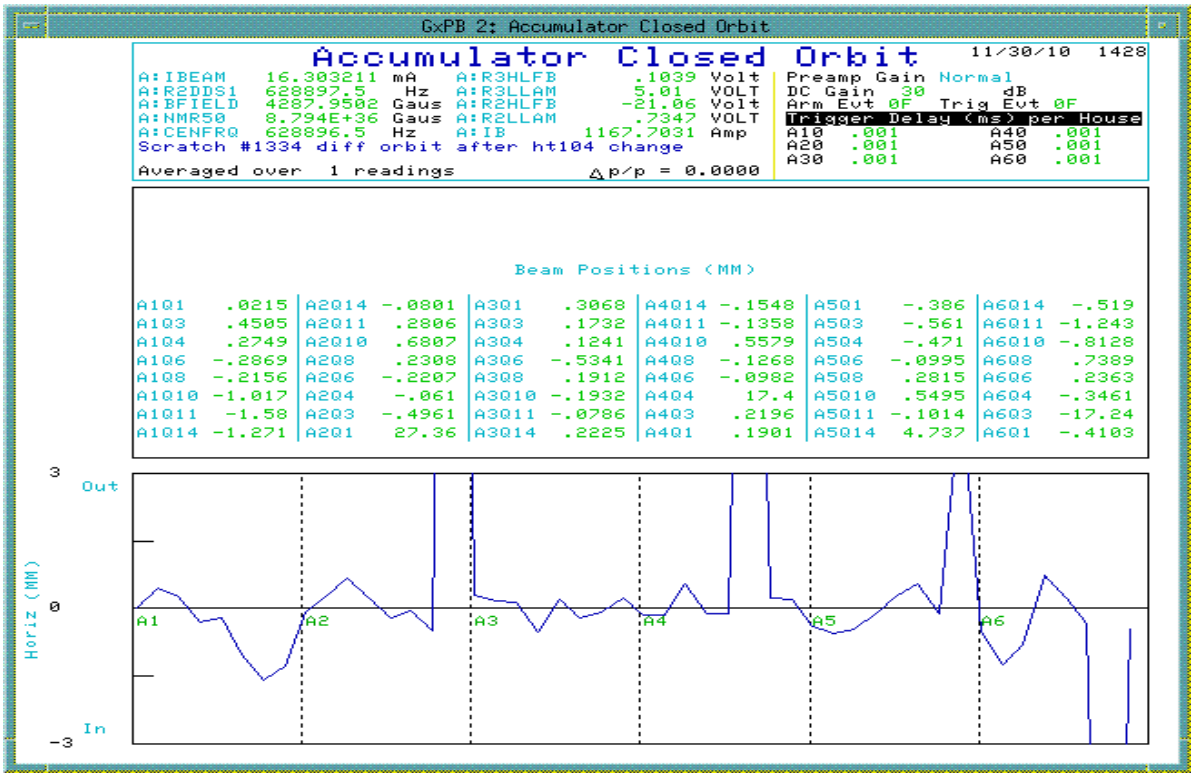
Device	Alarm Value	Present Info	Alarm Stat Now
D|P3AM3	.	.	Good
MASK	00000000000000000000000000000101		
NOMINAL	00000000000000000000000000000101		
NOW	00000000000000000000000000000111		
save properties	PRBSTS PRDABL		
Bit #	Description RED = bits in alarm (when alarm posted)	Now Text	Now Binary
0	Amp Voltage|Current Mon	On	1
1	Amp Voltage Monitor	Normal	1
2	Amp Current Monitor	Normal	1



Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:IBEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:IBEAMB sampled on $94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R:BEAMS (R:BEAME0[0]) pre xfer E10	Column 24 Number_23_R:BEAM (R:BEAME0[1]) post xfer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Transfers	Sets	Column 5 Number_4_Acc Horizontal Emittance	Column 6 Number_5_Acc Vertical Emittance	Column 8 Number_7_Acc Longitudinal Emittance
	Totals =>				453.21			432.18	95.36%	97.29%	96.77%	94.15%	57	18	5.9139	5.2895	1.9752
	Daily Average =>				453.21			432.18					57	18			
22090	Wednesday, December 01, 2010	6:59	27.26	8.34	21.56	337.18	357.60	20.78	96.39%	98.02%	99.49%	97.52%	3	1	6.085	5.588	1.984
22089	Wednesday, December 01, 2010	6:10	27.79	8.45	22.02	317.27	338.17	21.19	96.24%	97.35%	96.38%	93.82%	3	1	6.003	5.229	1.996
22088	Wednesday, December 01, 2010	5:17	26.94	8.14	21.47	297.77	318.04	20.52	95.55%	97.08%	96.93%	94.10%	3	1	6.331	5.457	1.983
22087	Wednesday, December 01, 2010	4:26	26.33	8.31	20.73	278.68	298.31	19.81	95.56%	96.89%	95.37%	92.41%	3	1	6.143	5.678	2.011
22086	Wednesday, December 01, 2010	3:36	27.00	8.29	21.43	258.75	279.18	20.63	96.27%	97.18%	96.88%	94.15%	3	1	6.138	5.533	2.018
22085	Wednesday, December 01, 2010	2:45	27.66	8.64	21.67	238.57	259.23	20.85	96.18%	97.31%	97.07%	94.45%	3	1	6.146	5.455	2.001
22084	Wednesday, December 01, 2010	1:53	26.85	8.22	21.37	218.55	238.98	20.60	96.39%	96.48%	96.50%	93.10%	3	1	6.084	5.264	1.977
22083	Wednesday, December 01, 2010	1:03	26.06	7.97	20.75	199.16	218.98	20.04	96.62%	97.65%	95.03%	92.80%	3	1	6.139	5.427	2.029
22082	Wednesday, December 01, 2010	0:21	34.47	10.89	26.25	174.58	199.50	25.19	95.97%	97.32%	96.95%	94.35%	3	1	6.684	5.449	2.003
22081	Tuesday, November 30, 2010	23:13	28.85	8.75	22.67	153.25	174.95	21.86	96.41%	97.34%	95.29%	92.76%	3	1	6.187	5.419	2.011
22080	Tuesday, November 30, 2010	22:21	28.94	9.15	22.49	132.09	153.52	21.59	96.00%	98.61%	99.18%	97.81%	3	1	6.196	5.464	2.002
22079	Tuesday, November 30, 2010	21:30	28.66	9.13	22.22	111.10	132.31	21.31	95.89%	99.13%	98.21%	97.36%	3	1	5.984	5.267	1.994
22078	Tuesday, November 30, 2010	20:36	27.42	8.69	21.46	90.78	111.29	20.64	96.18%	98.47%	98.98%	97.47%	3	1	6.175	5.412	2.014
22077	Tuesday, November 30, 2010	19:39	96.57	9.57	91.78	8.00	91.22	84.76	92.34%	96.09%	95.08%	91.35%	6	1	9.194	7.213	1.71
22076	Tuesday, November 30, 2010	15:22	28.50	8.11	23.04	336.69	358.55	22.14	96.08%	98.47%	97.00%	95.51%	3	1	6.055	5.427	1.96
22075	Tuesday, November 30, 2010	9:49	13.65	0.69	12.95	327.74	340.10	12.58	97.20%	98.96%	102.35%	101.28%	3	1	0.582	2.692	1.773
22074	Tuesday, November 30, 2010	9:20	25.95	8.64	19.47	309.76	328.17	18.70	96.09%	97.28%	96.65%	94.02%	3	1	4.782	4.45	2.04
22073	Tuesday, November 30, 2010	8:23	29.30	11.67	19.89	291.69	310.45	19.00	95.55%	95.91%	96.08%	92.15%	3	1	5.543	4.787	2.047



PC P60 POWER SUPPLY PARAM
P60 SET D/A A/D Com-U *PTools*
-<FTP>+ *SA* X-D/A X=L:TRIM90 Y=L:D7TOR ,L:TK1RAD,L:TUNRAD,L:TO1IN
COMMAND ...X Eng-U I=-7.58759 I= 30 , 0 , 80 , 30
-<22>+ One+ AUTO F= 2 F= 38 , 40 , 400 , 50
ACC10 acc30 acc50 deb10 deb30 deb50 protn inj dtoa ext bostr
-A:HT104 Pbar Acc Horz Trim .05 -.75 -.743 Amps .


GxPB 2: Accumulator Closed Orbit
Accumulator Closed Orbit
11/30/10 1428
A:IBEAM 16.303211 mA A:R3HLFB .1039 Volt
A:R2DDS1 628897.5 Hz A:R3LLAM 5.01 VOLT
A:BFIELD 4287.9502 Gaus A:R2HLFB -21.06 Volt
A:NMR50 8.794E+36 Gaus A:R2LLAM .7347 VOLT
A:CENFRQ 628896.5 Hz A:IB 1167.7031 Amp
Scratch #1334 diff orbit after ht104 change
Averaged over 1 readings Δp/p = 0.0000
Preamp Gain Normal
DC Gain 30 dB
Arm Evt 0F Trig Evt 0F
Trigger Delay (ms) per House
A10 .001 A40 .001
A20 .001 A50 .001
A30 .001 A60 .001
Beam Positions (MM)
A1Q1 .0215 A2Q14 -.0801 A3Q1 .3068 A4Q14 -.1548 A5Q1 -.386 A6Q14 -.519
A1Q3 .4505 A2Q11 .2806 A3Q3 .1732 A4Q11 -.1358 A5Q3 -.561 A6Q11 -1.243
A1Q4 .2749 A2Q10 .6807 A3Q4 .1241 A4Q10 .5579 A5Q4 -.471 A6Q10 -.8128
A1Q6 -.2869 A2Q8 .2308 A3Q6 -.5341 A4Q8 -.1268 A5Q6 -.0995 A6Q8 .7389
A1Q8 -.2156 A2Q6 -.2207 A3Q8 .1912 A4Q6 -.0982 A5Q8 .2815 A6Q6 .2363
A1Q10 -1.017 A2Q4 -.061 A3Q10 -.1932 A4Q4 17.4 A5Q10 .5495 A6Q4 -.3461
A1Q11 -1.58 A2Q3 -.4961 A3Q11 -.0786 A4Q3 .2196 A5Q11 -.1014 A6Q3 -17.24
A1Q14 -1.271 A2Q1 27.36 A3Q14 .2225 A4Q1 .1901 A5Q14 4.737 A6Q1 -.4103
Horiz (MM)
3
Out
0
In
-3
A1
A2
A3
A4
A5
A6